Client's Copy

JUL 23 1999

Via Facsimile and Mail

Gwen Zervis, Project Manager
New Jersey Department of Environmental Protection
401 State Street, PO Box 028
Trenton, New Jersey 08625

Re: EPA's Review and Comment of the *MW-19/Hot Spot 1 Off-site Subsurface Investigation*, L.E. Carpenter, Warton, New Jersey

Dear Ms. Zervis:

As we discussed over the telephone, below are the U.S. Environmental Protection Agency's (EPA's) comments on the *MW-19/Hot Spot 1 Off-site Subsurface Investigation*, for the L.E. Carpenter Superfund Site, Warton, New Jersey, dated December 1998.

1. As stated in EPA's December 1998, comment letter, this investigation was not to be considered as an end point, but rather a means to an end which still must be achieved. The Hydropunch study is appropriate for use in plume delineation for the purpose of siting wells, however, it should not be used as a substitute for actual monitoring well data. As stated in the letter, "The screening, if conducted properly, would provide valuable information necessary to ensure complete delineation of the organic plume, and could reduce or eliminate the need for locating additional monitoring wells in the near future. Therefore, the work plan should outline a prior groundwater screening investigation, in the nature of geoprobe, hydro punch, or other similar methodology, in the down gradient area before the installation of permanent monitoring wells." Especially in view that only four Hydropunch locations were successfully located anywhere near the target area, and these were in areas that are most likely to be considered side gradient, this investigation should now proceed to the next phase involving the installation of permanent ground water monitoring wells. This is especially true since Hydropunch data is not as accurate as data from monitoring wells, as is not reproducible and does not allow for the possibility of seasonal or other temporal variations. The extent of the plume has not been determined at this point. To this end at least one water table well should be placed down gradient along the plume axis, with an additional well in each of the two adjacent side gradient directions.

2. As stated above, none of the four locations at which Hydropunch samples collected are down gradient of the known extent of the plume. Therefore, the reported decrease in

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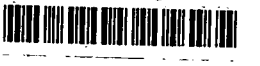

contaminant concentrations over two sample rounds need not result from natural attenuation, as claimed in the report, but can easily result from being on the margin of the plume, or from a plume which is moving downwards or going under water table monitoring points. As stated above, since the down gradient extent of the plume has not been determined, and Hydropunch has proven to be ineffective due to subsurface conditions, the plume should now be delineated using conventional monitoring wells.

3. As stated above, since the investigation made no attempt to determine the vertical extent of the plume, this should be scoped out as the goal of the next phase of work. Moreover, the subsurface stratigraphy was either not determined or reported in the investigation report, which is an important guide to determining the vertical delineation of the plume. The stratigraphy must be determined in the next phase of investigation, or clarified in a revised report, to help resolve this issue. To this end, a minimum of one well in the source area and a second well located at the toe of the plume should be the minimum considered necessary.

4. As stated above, the decrease in contaminant levels between the two existing sample rounds is not clear evidence of natural attenuation. One important criteria that must be satisfied before a claim for natural attenuation should even be considered is that contaminant concentrations must show a statistically consistent decline over time. It must also be shown that subsurface conditions are conducive to the degradation of BTEX through sampling for appropriate parameters.

5. The report should clarify whether the analyses performed included the contaminant MTBE. The analysis of MTBE should be considered because it commonly co-occurs with BTEX and is more persistent, even when conditions are conducive to biodegradation, and can help in delineating the down gradient extent of the plume. Therefore, future sampling should include this parameter.

Thank you for providing the opportunity to review this report. If you have questions or comments, please feel free to call me at (212) 637-4411.

Yours truly,

Stephen Cipot, Remedial Project Manger
Southern New Jersey Remediation Section

cc: Andy Crossland, PSB
Kimberly O'Connell, Chief, SNJRS

bcc: Stephen Cipot, SNJRS